

CAMBRIDGESHIRE COUNTY COUNCIL
COUNTY DEVELOPMENT PLAN
SURVEY REPORTS

COMMUNITY PATTERNS
AND SPHERES OF INFLUENCE
IN
CAMBRIDGESHIRE

JANUARY 1951

SURVEY REPORTS

GENERAL NOTE

Under the Town and Country Planning Act, 1947, every Local Planning Authority is required to carry out a survey and to prepare an outline Development Plan for its area, for submission to the Minister of Town and Country Planning (now the Minister of Local Government and Planning).

The survey not only forms the basis for the preparation of the Development Plan but also provides an indispensable background of knowledge for the day to day control of development.

During the past two years the Cambridgeshire County Planning Department has collected and assembled a great deal of information on the physical, social and economic structure of the County, and summaries of the most important aspects of the work can now be presented in the form of draft reports as follows:-

Geology, with special Reference to Commercial Minerals.

Population.

Community Patterns and Spheres of Influence.

Industry and Employment.

Agriculture.

Communications and Traffic.

Utility Services.

These draft reports have been considered and approved by the Development Plan Sub-committee set up by the Town and Country Planning Committee and are now published for consideration and comment.

Observations will be welcomed.

W. L. WAIDE,
County Planning Officer.

County Hall,
Hobson Street,
Cambridge.

January, 1951.

CAMBRIDGESHIRE COUNTY COUNCIL
PLANNING DEPARTMENT

Draft Report
on
COMMUNITY PATTERNS AND
SPHERES OF INFLUENCE IN
CAMBRIDGESHIRE

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and
DIAGRAMS

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COMMUNITY PATTERNS IN CAMBRIDGESHIRE

I. THE THEORETICAL PATTERN OF COMMUNITIES

1. Attention has frequently been drawn to the regular spacing of settlements in rural areas. This has given rise to the theory of urban hierarchies, which attempts to explain the nature and causes of the regular spacing and gradation in size of settlements.

2. In the first stage, the size and distribution of settlements is determined by the nature of the rural economy. As the primitive economy of the early villages develops, so the particular needs and services resulting from a division of labour and specialisation lead to gradations in the size and distribution of settlements.

3. Immediate needs are satisfied within the smallest unit, the village. Additional services are provided by certain villages, conveniently sited in relation to others, and these in their turn are dependent on larger centres for specialised services needing a larger tributary area in order to function economically.

4. As a result, a series of settlements develops, conforming in theory to a hexagonal pattern as in Diagram I, and graded according to the following scale:-

Grade of Settlement	Distance Apart (miles)	Service Area (sq. miles)
I	2	3½
II	4	14
III	7	40
IV	12	125
V	21	375
VI	36	1000

5. The theoretical pattern is in fact never found in practice although close approximations to it exist in purely agricultural areas. Deviations from the pattern are enforced in the first instance by physical factors, while the process of natural selection never remains static. As economic circumstances change, so certain centres develop and usurp the functions of other centres, which in consequence suffer a decline.

6. Although the forces of geographic and economic selection control the evolution of settlements according to this pattern, undoubtedly the adequacy of communications and the means of transport available are the major factors determining the distribution of the various grades of settlement.

7. We may consider the basic agricultural village, the smallest practical unit, as a Grade I settlement. It performs a few simple functions, supplying the daily needs of its inhabitants and its service area is limited to a size dictated by the necessity for the rural population to live close to, and generally within walking distance of, their work.

8. Ranking Grade II in the hierarchy is the larger village which includes a greater proportion of non-agricultural workers engaged in handicrafts and retail trades and is therefore able to supply a slightly greater range of facilities. The "urban" village of about 1500 inhabitants, which has developed larger in size and assumed a greater importance by reason of certain original advantages over its neighbours, may be regarded as Grade III in the scale. Within its tributary area it includes a ring of six or seven grade I and II villages for which it is able to supply the majority of weekly needs.

9. Distinguished by a greater number and variety of those services found in urban villages, the market town, Grade IV in the hierarchy, is a centre for the collection and marketing of agricultural produce and provides also those commercial, professional and social facilities generally lacking in the rural area. The extent of the effective tributary area of a market town is usually limited to a radius of 6 or 7 miles, having been determined in the past by the slowness of medieval road transport.

10. Each succeeding rank in the hierarchy, its grading and the distance apart of similar settlements (and consequently the size and population of its service area) is determined by the increasing range and complexity of services available.

II. THE COMMUNITY PATTERN IN CAMBRIDGESHIRE

11. An examination of the community pattern in Cambridgeshire shows that although it is possible to distinguish something of the theoretical hexagonal pattern, it has nevertheless been distorted. The distribution of settlements does not correspond with the pattern nor do the various grades correspond with their relative importance in the scale.

12. From the time of the Domesday Survey up to the present time, the settlement pattern, in so far as it concerns the number and siting of villages, has been fundamentally stable. In fact only twelve new villages have been established since that date and five have ceased to exist. It is evident that physical factors are responsible for the original distortion of the actual pattern from the theoretical, but a study of the processes of economic selection is necessary to explain the deviation in the grading of settlements.

13. The community pattern has always been dominated by the country town. Cambridge was in Medieval times the administrative centre of the County and was even then an important commercial centre. It has not only maintained its importance throughout all the changes which have taken place since, but has extended its sphere of influence over an even wider area, concurrently with the growth of the university and at a later date with the introduction of industry.

14. When the community pattern of Cambridgeshire developed during the Middle Ages, the economy of the County was based almost entirely on agriculture and the whole cycle of production, distribution and consumption for the greater proportion of goods took place within the County itself. The local markets were usually sufficient for dealing with the exchange of goods although long distance trade did of course take place, especially in connection with Stourbridge Fair, whose reputation was famous throughout Europe.

15. The importance of the local market in the almost self sufficient economy of the County at this time, when the only means of transport was by foot or by horse, can be measured by the fact that there were some twenty-eight places within the County which had a market, usually dating back to the 13th or 14th Century. The markets were, as Diagram 2 shows, widely distributed throughout the County and were designed to cater for the everyday needs of the population within a small service area. Only in one or two cases, such as at Cambridge and Ely, did the market achieve a more than local importance.

16. Whilst in a modern society occasional needs and services are supplied by certain fixed central places, in medieval times these were provided by fairs, which moved from place to place. Because the means of transport were then limited and the economic and social needs to be satisfied far less complex, it was only by continual movement that the fair could secure the public support which the rapid rise in the country's population and the advent of the railway, the car and the motor-

coach has secured for the modern city.

17. Fairs are known to have been held in at least nineteen towns or villages in the County (see Diagram 2) and in some of these places two or more fairs were held annually. They lasted as a rule for a few days only, but occasionally for as long as twenty two days. St. Awdrey's Fair at Ely was "a fair of great resort, particularly from London, Yarmouth, Colchester and Cambridge", but Stourbridge Fair was "the most famous fair in all England".

18. Up to the 18th century, the relative importance of each settlement in the community pattern remained essentially unchanged. Cambridge was the most important town. The outer ring of market towns was the same as exists today, with perhaps the exception of Newmarket, namely - Ely, Soham, Saffron Walden, Royston, St. Neots and St. Ives (with Huntingdon). Newmarket only assumed importance under the patronage of the Stuart kings and has since gradually usurped many of the functions of Soham. The Grade III villages, which have now lost a good deal of their former importance, or are lacking altogether, probably included Caxton, Cottenham, Burwell, (or Swaffham Prior) Linton, Foxton, Bassingbourn and Gamlingay.

19. The revolution in transport and communications has brought about a concentration of functions in fewer centres. The construction of turnpike roads and the advent of the stagecoach marked the first stage of this change. By the middle of the 18th century the number of markets held in the County had been reduced to ten and by the beginning of the next century to four. At this time fourteen fairs, distributed between nine different places, were still held regularly but in four cases only for the hiring of labour and in six more only as holiday festivals. Diagram 3 shows the community pattern in the 19th century.

20. Events have since succeeded one another with greater rapidity. The relative importance of towns was affected by the construction of the railways in the mid 19th century and accessibility by rail became more desirable than accessibility by road. During the 20th century the motor car and bus brought about what E. G. R. Taylor calls "the new traffic revolution", making cheap and efficient transport available to all inhabitants of the countryside so that visits to the larger centres with superior facilities became both possible and desirable.

21. In addition the effects of the industrial revolution have intensified the tendencies to change in the community pattern. The employment opportunities available in the towns attracted people from the rural areas. Increasing specialisation and mass production caused a decline in village crafts and the secondary population of the countryside were forced to seek work in the towns.

22. The greater prosperity of industry meant better wages and conditions and a higher standard of living in the towns, which thus became an increasing attraction to the rural population. As urbanisation increased so the demand for and supply of services have increased, causing a greater disparity between town and country and furthering the cycle of change.

23. Although the physical pattern of settlement has been left intact, these rapid developments over the past hundred years have upset the equilibrium existing in the relationships between urban and rural areas. As a result the rural areas have, to a very large extent, been left socially and economically devitalised. Smaller settlements have declined; the small market town has remained stable or has grown very slightly; while the larger towns have grown rapidly. In fact, the bigger the town, the faster has been the growth. Consequently there is today an ever-increasing concentration of economic, administrative, social and cultural functions in the larger urban centres.

24. The evolution of the community pattern to its present form has been assisted by the network of road and rail communications which radiate from the natural economic

centre of the area, the Borough of Cambridge. We may regard Cambridge as a Grade VI settlement at the head of a regional hierarchy. It provides a great variety of services, social and cultural, and is a regional administrative centre. The next lower grade is occupied by such towns as Bedford, Peterborough and Bury St. Edmunds, outside the area under consideration.

25. Also lying outside the County boundary are the Grade IV settlements, the market towns, but in all cases their spheres of influence extend within the County. They include Ely, Newmarket, Haverhill, Saffron Walden, Royston, St. Neots, and St. Ives (with Huntingdon). With the improvements in transport they have to a large extent usurped the functions of those Grade III villages mentioned earlier as having formerly held markets, especially as the dominance of Cambridge itself prevents any Grade III settlement in its immediate vicinity.

26. There is no definite pattern of Grade III villages each serving a ring of small Grade I and Grade II settlements for the reasons already mentioned. In various parts of the County there is an industrial overlay (Sawston, Histon, Burwell, etc.) and dormitory development (Shelfords, Girton, Cheveley) which influences and distorts the settlement pattern. There are in addition certain larger villages which serve a small area for one or two special functions, (e.g. village colleges at Linton and Bottisham; fire stations at Cottenham and Swaffham Bulbeck; police units at Melbourne and Sawston).

27. It remains to be seen whether, in fact a pattern of Grade III villages can be established which will be able to maintain a higher rank in view of the economic tendencies towards concentration of services in larger settlements. It is difficult if not impossible to reverse the decline of a settlement, for example by establishing new cultural institutions, if the economic basis of the place is shrinking. The object of planning must be to avoid over-centralisation if possible and to guide the changing pattern of economic relations into a reasonably balanced and satisfactory form.

III. SPHERES OF INFLUENCE

28. In an attempt to determine the relative importance of towns in the community pattern, surveys have been carried out with the object of suggesting a grading of existing villages and towns, and of measuring the spheres of influence of all large villages and towns which provide smaller villages with shopping facilities, amenities and other services.

Spheres of Influence determined by village questionnaires

29. A survey carried out by the Ministry of Town & Country Planning in 1946 investigated the location of shopping and recreational facilities, social, administrative and professional services for each village in the Eastern Region. The information was obtained by personal interview with one or two selected persons in each village, and from the replies given villages were roughly graded according to the amenities and services provided. Maps were prepared showing the areas of weekly and occasional influence of the towns and larger villages, determined by the necessity for village inhabitants to visit them for services not obtainable in their own village.

30. The results of this investigation reveal the large disparity in function between the towns as we now find them. Diagram 4 shows the very large 'occasional' sphere of influence of the Borough of Cambridge which, with the exception of a small area on the east in the tributary area of Bury St. Edmunds and small areas on the extreme west and southwest looking towards Bedford and Hitchin, covers practically

the whole of the County, and extends to the market towns on its borders.

31. Diagram 5 showing weekly spheres of influence explains the absence of Grade III settlements. The dominance of Cambridge is such that it has usurped the functions of the old Grade III settlements near it. The outer ring of villages in the county all look toward the market towns on the boundary except in such cases as Linton, Sawston and Soham, which, owing to the orientation of communications in their districts, are able to maintain a small service area.

32. The enquiry credited Bourn with a small weekly sphere of influence but this seems to be misleading, while the grounds for giving Willingham a weekly sphere are very slender. Cottenham, although larger than Willingham, comes directly under the influence of Cambridge because of the good bus connection to the town.

33. The disadvantage of the above method is that a questionnaire involves either an exhaustive inquiry or, as was the case here, the averaging of a few opinions as to the habits of the village people. Furthermore, it presented a static picture of the community pattern, with a clear cut division between occasional and weekly spheres of influence which does not exist. The whole system remains in fact in a state of equilibrium, responding continually to changes in the forces acting at any one time, and, in the long term, showing a positive change in the balance of the community pattern.

Spheres of Influence determined by daily bus services

34. This state of balance is exemplified by the spheres of influence as derived from a study of daily bus services. Bus operators have in effect supplied services according to public demand. It is true that in so doing they may create a demand and, by improving facilities, alter the natural sphere of influence of a town. Nevertheless, a study of bus services not only indicates what travel can and does take place, but also, in the daily pattern of bus transport, represents the average of all the various factors deciding people's movements, whether these are made for shopping, entertainment, or for any other purpose.

35. By studying the extent of the daily services from each centre, the spheres of influence of all towns in the area were delineated and mapped for each weekday. From these maps it is clear that the strength of the influence of the urban centres varies with the occurrence of market days and early closing days.

36. The influence of Cambridge itself is predominant at all times, although the extent of its influence varies throughout the week, being at a maximum on Monday, the agricultural market day, and close to the maximum on Wednesdays and Saturdays, the important shopping days. It is worth noting that on Thursday, early closing day in Cambridge, the vacuum left by the contraction of Cambridge's sphere of influence to its minimum is not filled by a corresponding expansion of the spheres of influence of the other market towns. It is true that Ely and St. Neots, which hold markets on this day, exert a greater influence than usual, but they encroach very little upon the County.

37. An examination of conditions on other days of the week shows that the area of influence of Cambridge decreases, except on Thursday, only to a minor extent and losses occur only to those towns holding markets.

38. The boundary towns hold their markets on different days of the week and it is readily apparent that with the occurrence of a market day in any particular town, its sphere of influence expands in relation to the increasing attraction of the services offered to the rural area immediately in its neighbourhood. Apart from the inclusion of the Duxford area within the sphere of influence of Saffron Walden on Tuesday, however, the area tributary to Cambridge is not greatly affected; the extension

of the spheres of influence of the majority of the border market towns being for the most part eccentrically away from the county.

39. Diagram 6 shows the weekly spheres of influence of the market towns on their market days and indicates, firstly, the overwhelming importance of Cambridge, and secondly, the relatively minor extent to which the areas tributary to the other market towns encroach upon the County, the extensions being determined by the lines of communication in their areas.

40. As one might expect, on Saturday, the most important shopping day, all centres tend to expand their spheres of influence and come into conflict with those of their neighbours. The influence of Cambridge is predominant, with all peripheral centres restricted by it. Most of the centres west of the County (Huntingdon, Bedford, Biggleswade, Hitchin) hold markets on Saturday, causing a heavy concentration of traffic there and the Bedford sphere of influence is remarkable in that it extends over St. Neots and masks completely the attraction St. Neots undoubtedly has.

41. A feature of this investigation is the complete absence, with the one exception of Soham, of any sphere of influence being assigned to any of the urban villages, which formerly played an important part in the rural community structure, again emphasising the modern trend towards concentration in the larger urban centres and the tendency for the larger and wider network of the community pattern to be established.

The Sawston survey

42. In order to discover whether villages still tend to establish themselves as centres in a small tributary area of minor villages, a detailed social and economic survey was made of the Sawston area in 1948.

43. The results of this investigation suggested that a "sphere of influence" as such is difficult to define, the area of influence varying considerably with the activity in question (i.e. shopping, recreation, education, work - see Diagram 7) although in all cases a correlation with the availability of transport facilities was established.

44. It was apparent that the influence of Cambridge is overwhelming, both for shopping and recreation, and that the effect of the public transport services is to take people out of the area. Whether people travel to Cambridge or to Saffron Walden seems to depend on the convenience and frequency of the bus service.

45. Sawston as a shopping centre appeared to be declining and for this purpose it had a very small service area. Very few people in the district travelled to Sawston to shop, and shopping expeditions to other villages were also rare, being made only from villages having no post office. On the other hand all the villages in the district were adequately served by delivery vans, frequently from as far afield as Saffron Walden, and Sawston's delivery area bore no relation to the shopping sphere of influence.

46. The weekly recreational sphere of influence was largely determined by visits to the cinema and to the village college. It was noted that few people came to the Village College from villages beyond the area served by the college special bus service, but the cinema attracted people without any special service. The degree of dependence or self-sufficiency as far as the social activities of a village are concerned bears little relation to the facilities available and may depend entirely on the enterprise of a single individual.

47. This survey also confirms that the factors determining place of employment bear no obvious relation to those determining centres for shopping, recreation and

education. Employment is easily changed and is subject to seasonal fluctuations and changes in economic conditions. As is the case with the service area of an educational centre, artificial* transport services, run specially by particular firms, may draw on a wide area, but should circumstances change, the cessation of these services would result in a contraction of the tributary area.

General

48. No account has been taken of rail travel in delimiting spheres of influence, but since the pattern of rail communications is so established that it serves the county town and the more important market towns, it is thought that any evidence from this source would only further emphasise the existing community structure. Work is, however, in hand on this aspect. For the great majority of people, the cheaper, more convenient and more frequent bus service is the chief means of travel, especially for relatively short distances.

49. It is evident that there is a state of balance in the spheres of influence of urban centres and that, within the larger pattern of the service areas of the market towns, minor centres may exist, but it cannot be assumed that a village which has a small tributary area for shopping will also be a centre for recreation. A new type of centre has developed, the dormitory village, which is changing the community pattern.

50. The factors influencing the change of the old established community pattern have undoubtedly been the vast improvement in transport facilities, the concentration of employment opportunities in the town, and the far superior services and amenities which modern society demands and which only the larger urban centres can economically provide. It is important to note that the minor centres are today relatively unimportant features in the rural community structure, their most important functions having been usurped by the larger urban centres.

IV. PLACE OF RESIDENCE AND PLACE OF WORK

51. It was noted earlier that the factors determining place of employment bear no obvious relation to those determining centres for shopping, education and other social activities. It was also noted that there has been a marked tendency for persons who do not earn their living directly from the land to find employment in the larger centres.

52. Although a large proportion of the rural population has not only come to work in the towns, but also to live in them, modern transport facilities have made possible the divorcing of place of residence and place of work, and where there is a lack of employment opportunities in or near a village people will often travel quite long distances daily to and from their work. There is also a noticeable tendency for townspeople, particularly among the higher income groups, to move outwards into the rural areas to live while still retaining their work in the towns, although this may in some cases be due solely to shortage of accommodation in the towns.

53. The separation of work from residence has resulted in certain villages acquiring a 'dormitory' function which is characteristic only of the modern community pattern. Although the dormitory villages do not perform an important commercial function in their areas, they are becoming important social units and for this reason, where adequate facilities are lacking to meet the needs of this new status, provision should be made for their development.

54. From the results of surveys carried out by about 30 Parish Planning Groups in the County it is possible to obtain a rough idea of the proportion of workers who travel

* 'Artificial' is used in the sense that the routes of the bus services do not follow the natural flow to the main centres.

to Cambridge daily. As would be expected, the proportion falls with increasing distance from the Borough and in areas more remote from good lines of communication.

55. In the villages surrounding Cambridge about 50% of the working population are employed in the town and in the river valley villages, which have good communications, the proportion is some 22% from as far afield as Linton and the Abingtons. Even from the less accessible Parishes of the chalk uplands and the Fens as many as 9% of the workers travel to Cambridge.

56. The Parish Group surveys also show that the proportion of people working in local services in a village is much lower close to Cambridge than in the outer areas of the County. In Linton 43%, and in Burwell 35% of the working population are engaged in local services, while in villages of about the same size near Cambridge, such as Girton, the figure is only 14%.

VI. CONCLUSIONS AND PLANNING POLICY

57. Changes in the community pattern have taken place since records were available, but they have been most marked within the past 100 years with an increasing tempo in recent years. These changes have affected the functional, economic and social status of the towns and villages within the community pattern.

58. The principle factors contributing to these changes have been:-

- (a) the improved mobility enjoyed by the community in the form of private or public transport
- (b) the higher standard of commercial and recreational facilities, requiring a larger capital outlay and therefore a larger service area
- (c) the general rise in the population of the area
- (d) the growing importance of Cambridge as an industrial and commercial centre.

59. Up to 1939 the changing community pattern was due largely to economic and social forces over which there was no effective control. Today the position is different, and although it will always be difficult to assess the reason for new changes in the early days, there is now available to the Planning Authority sufficient means whereby the changes in the community pattern can be measured and within certain limits action taken to arrest an undesirable change.

60. There is reason to believe that there is a growing tendency on the part of the employed population to use the improved transport facilities in order to live further away from their place of work. This factor, although not new, is bound to have a fundamental effect on the form and character of the villages in the County, particularly those adjacent to Cambridge.

61. It is very possible therefore that the next twenty years will see a population movement away from the larger towns into the smaller towns and villages of the countryside. This will be a reversal of the general trend during the past 100 years.

62. This movement will bring with it a change in the character of the villages. They will cease to be dependent on the agricultural economy of the area and the "new" population is bound to demand a higher standard of services, particularly in the general amenities, recreational and cultural facilities of the area. In this connection there is evidence of the growing attraction of the Village Colleges.

63. Planning policy should therefore be directed towards improving those

villages within the County which form the natural centres for the surrounding areas. These villages should be among the first to be dealt with in more detail so that proper provision is made for the anticipated needs. In particular new development should be encouraged in those areas which can most economically be provided with public utility services.

64. Although it is in the general interest of the County as a whole to encourage new development which is not directly associated with the needs of the countryside, to locate itself in the "King Villages" - at least in the early stages. Nevertheless each community, however small, which by tradition has played a part in the agricultural economy of the County, must be maintained and if possible improved, and above all must be considered as a vital and necessary part of the whole community pattern.

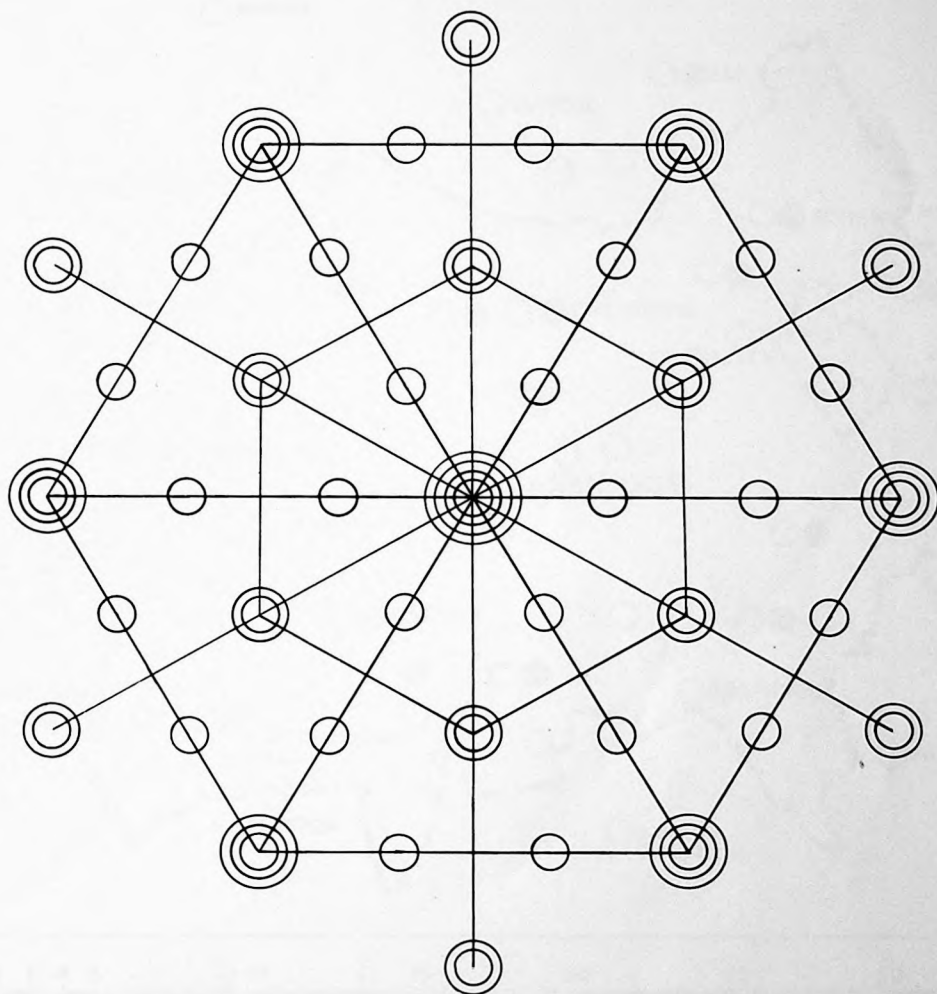
65. It is obvious from the study of the relationship between the communities, what a strong interdependence there is between the market towns on the periphery of the County, but just outside, and the areas of the County that look to them as their centres.

This interdependence is traditional and based on social forces which are not affected by Local Government Boundaries. Further it appears certain that the improved mobility which is accounting for the increasing dormitory character of the County is also tending to emphasise the importance of these centres for shopping, commercial or recreational purposes. It follows that an improvement in the general standard of amenities and services provided by these centres will have a direct beneficial effect on a large area of the County.

Therefore, although these towns are outside the Administrative County, it is in the general interest of the County to press for their improvement and expansion, thereby providing a higher standard of amenities and employment opportunities for those areas dependent on them.

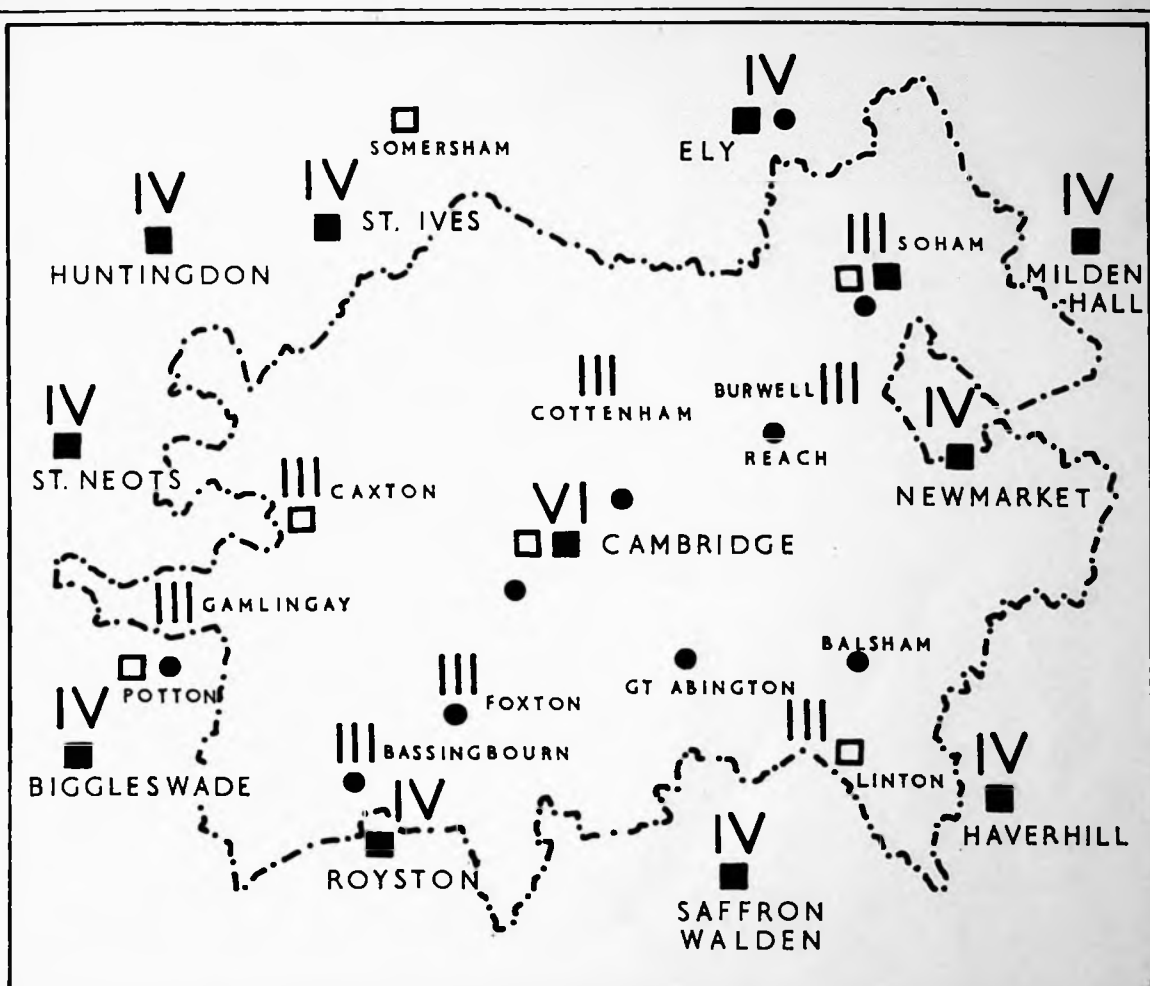
66. A case can be made out for the location of some of the County Services in these market towns.

67. In turn, the interdependence of all the Market Towns surrounding the County on Cambridge itself as a County and Regional Centre, has been established, and their requirements must be met in the Plan for the Borough.



THEORETICAL SETTLEMENT PATTERN

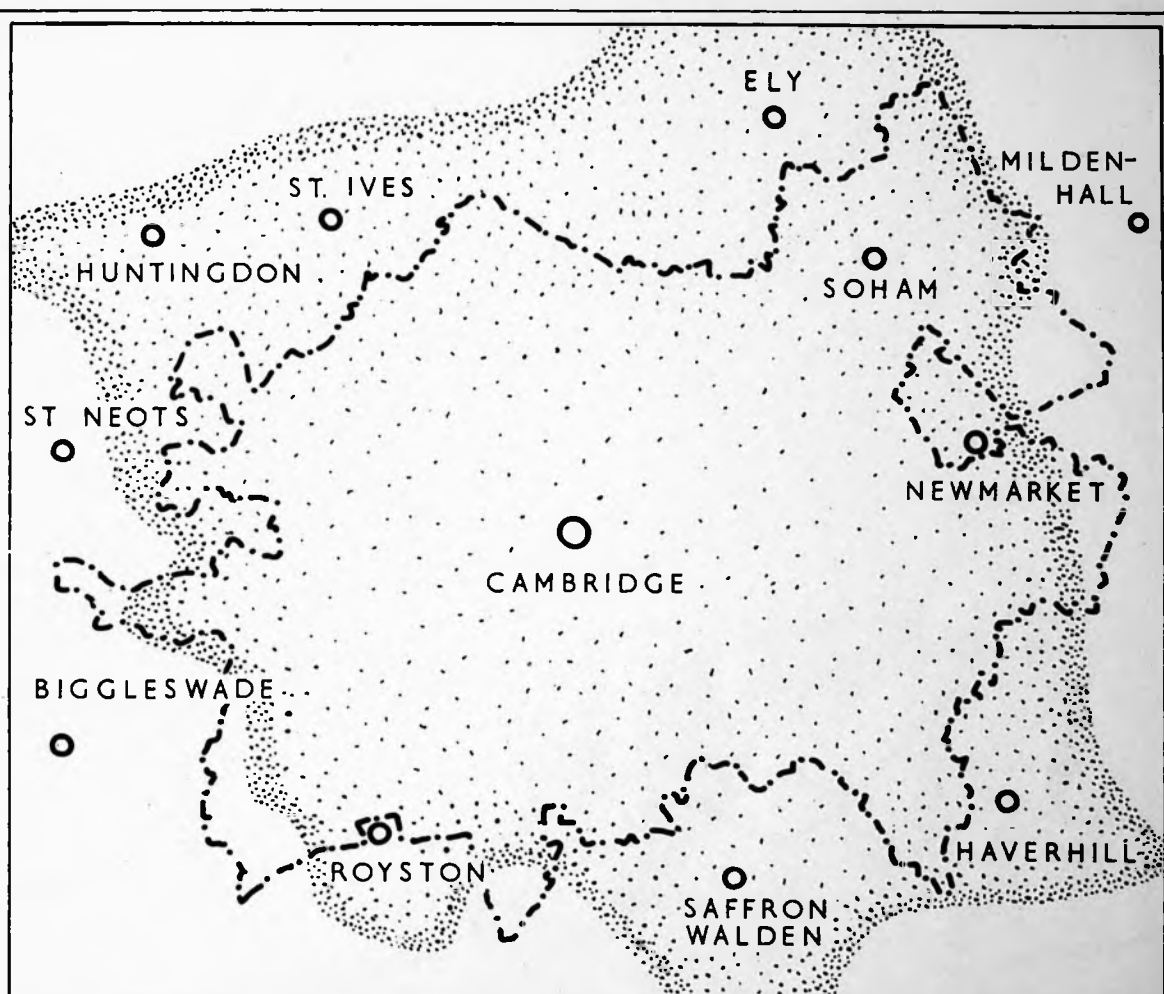
THE DIAGRAM SHOWS THE THEORETICAL
PATTERN OF COMMUNITIES AROUND A
GRADE IV SETTLEMENT:— A MARKET TOWN



THE COMMUNITY PATTERN IN THE 19TH CENTURY

MARKETS IN 1800 □ FAIRS IN 1800 ● MARKETS IN 1880. ■

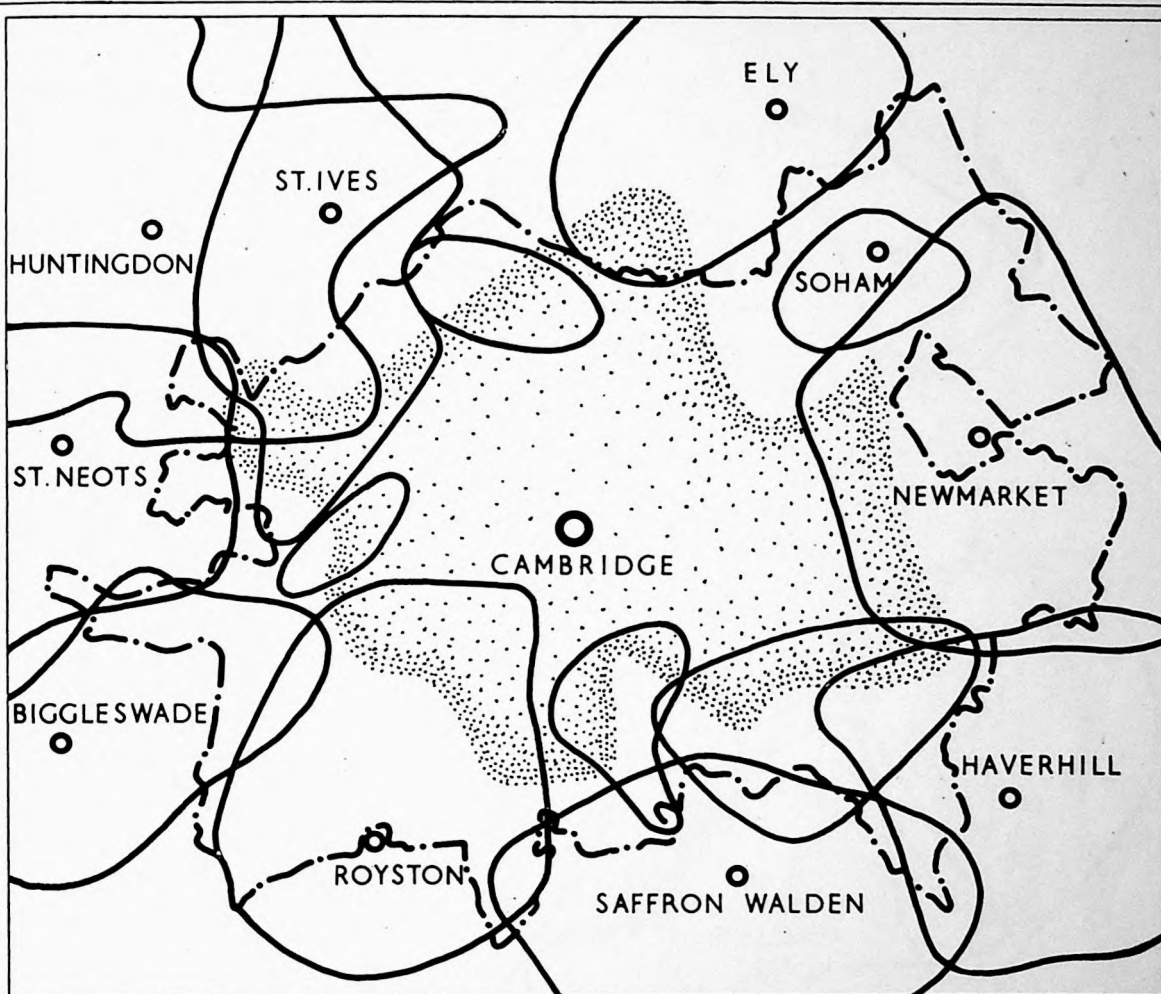
AGRICULTURAL VILLAGES (NOT SHOWN)	I
LARGER AGRICULTURAL VILLAGES (NOT SHOWN)	II
"URBAN" VILLAGES	III
MARKET TOWNS	IV
COUNTY TOWNS	V
REGIONAL CENTRE	VI



0 1 2 3 4 5 10 15 20 25 30 34
MILES

OCCASIONAL SPHERE OF INFLUENCE OF CAMBRIDGE

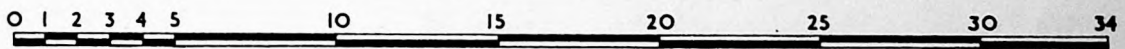
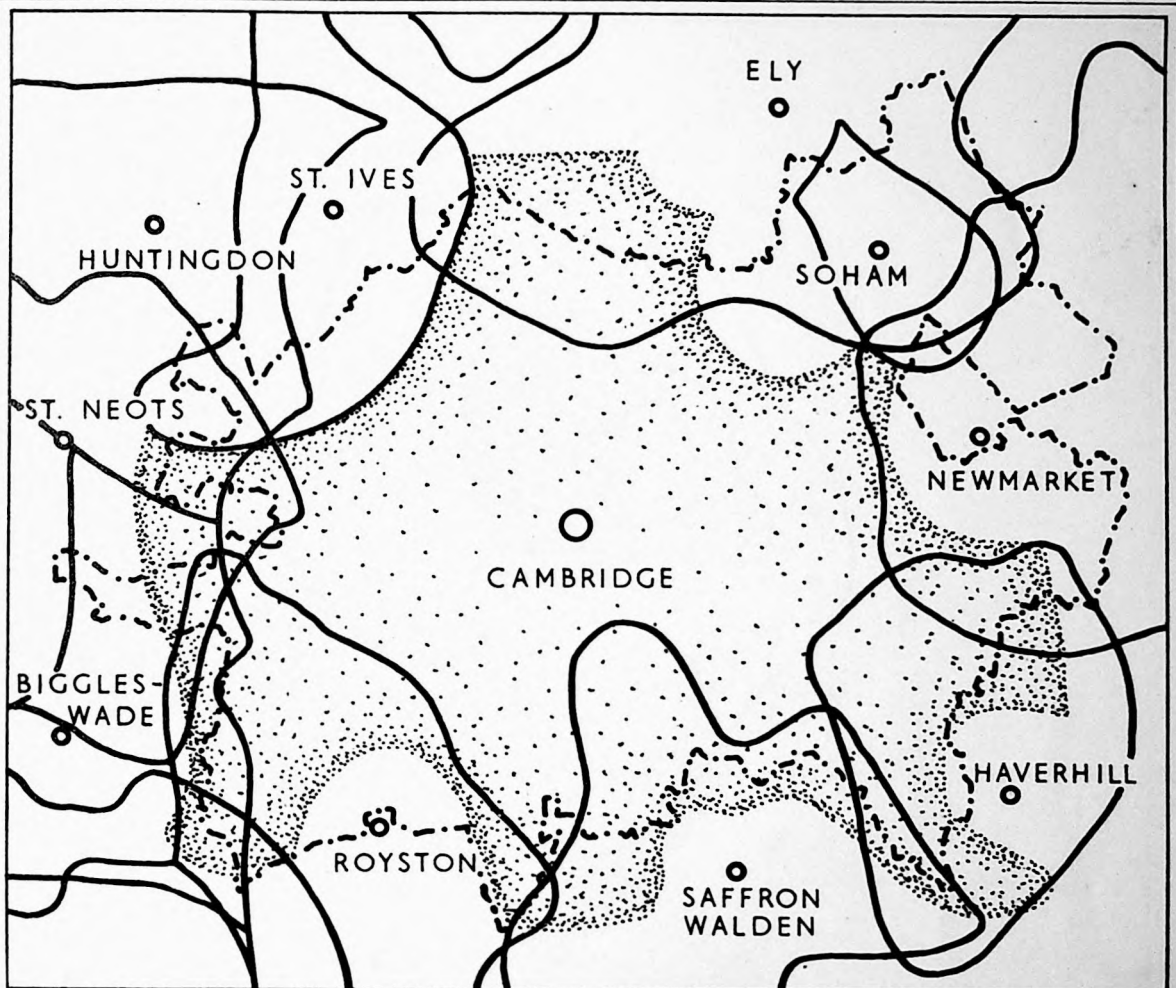
DEDUCED FROM A VILLAGE QUESTIONNAIRE 1946
CAMBRIDGE SPHERE OF INFLUENCE IS SHOWN STIPPLED



0 1 2 3 4 5 10 15 20 25 30 34
MILES

WEEKLY SPHERES OF INFLUENCE.

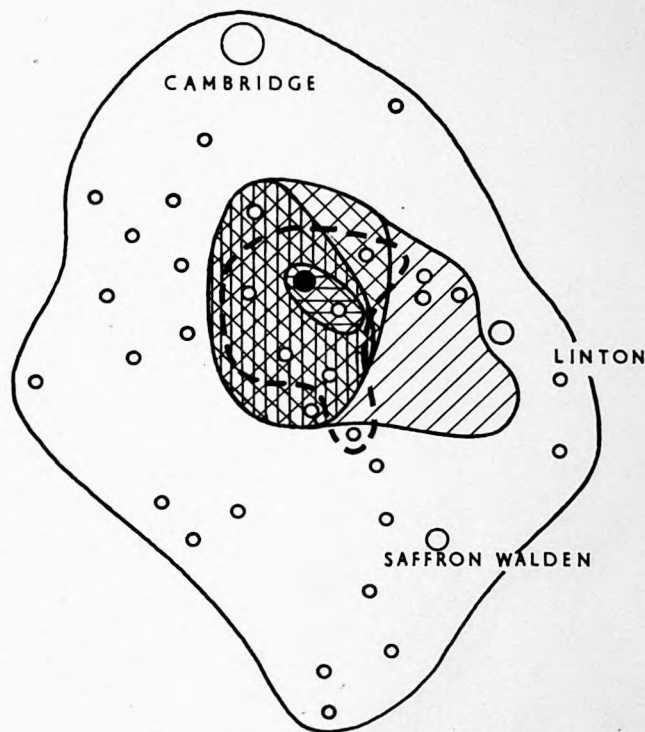
DEDUCED FROM A VILLAGE QUESTIONNAIRE 1946
CAMBRIDGE SPHERE OF INFLUENCE IS SHOWN STIPPLED



MILES

WEEKLY SPHERES OF INFLUENCE

DEDUCED FROM MARKET DAY BUS SERVICES IN
JULY 1949. THE CAMBRIDGE SPHERE OF INFLUENCE
IS SHOWN STIPPLED



SAWSTON SPHERE OF INFLUENCE

RECREATION, ADULT EDUCATION, ETC....

DELIVERY AREAS OF SHOPS.....

SHOPPING EXPEDITIONS.....

EDUCATION.....

EMPLOYMENT.....

AREA OF INFLUENCE DELIMITED BY M.O.T.C.P.